

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: DENNISON POND	Lake Area (ha): 4.86
Town: FRANCESTOWN	Maximum depth (m): 2.2
County: Hillsborough	Mean depth (m): 1.0
River Basin: Merrimack	Volume (m ³): 47000
Latitude: 43°00'36" N	Relative depth: 0.9
Longitude: 71°45'42" W	Shore configuration: 3.83
Elevation (ft): 750	Areal water load (m/yr): 9.57
Shore length (m): 2995	Flushing rate (yr ⁻¹): 9.90
Watershed area (ha): 87.4	P retention coeff.: 0.56
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

20 February 2001

29 August 2000

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 60%	TINY PENNATE DIATOM SPP	70%
	#2	(ALL ALGAE SPARSE)		
	#3			
PHYTOPLANKTON ABUNDANCE (units/mL)				
CHLOROPHYLL-A (µg/L)			20.22	
DOM. ZOOPLANKTON (% TOTAL)	#1	KELICOTTIA 70%	POLYARTHRA 33%	
	#2	KERATELLA 17%	NAUPLIUS LARVA 24%	
	#3		COLLOTHECA 22%	
ROTIFERS/LITER		484	566	
MICROCRUSTACEA/LITER		<1	205	
ZOOPLANKTON ABUNDANCE (#/L)		506	798	
VASCULAR PLANT ABUNDANCE			Common/Abun	
SECCHI DISK TRANSPARENCY (m)			1.4	
BOTTOM DISSOLVED OXYGEN (mg/L)		1.0	5.1	
BACTERIA (E. coli, #/100 ml)	#1		10	
	#2		15	
	#3			

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:

Lake: DENNISON POND
Town: FRANCESTOWN

	20 February 2001		29 August 2000		
DEPTH (m)	1.5		1.0		2.0
pH (units)	6.1		7.1		6.7
A.N.C. (Alkalinity)	11.6		8.1		7.9
NITRATE NITROGEN	0.07		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.61		0.45		0.47
TOTAL PHOSPHORUS	0.005		0.014		0.018
CONDUCTIVITY (μ mhos/cm)	48.0		31.7		31.7
APPARENT COLOR (cpu)	38		33		34
MAGNESIUM			0.60		
CALCIUM			3.0		
SODIUM			2.4		
POTASSIUM			0.50		
CHLORIDE	2		< 2		< 2
SULFATE	4		2		2
TN : TP	136		32		26
CALCITE SATURATION INDEX					

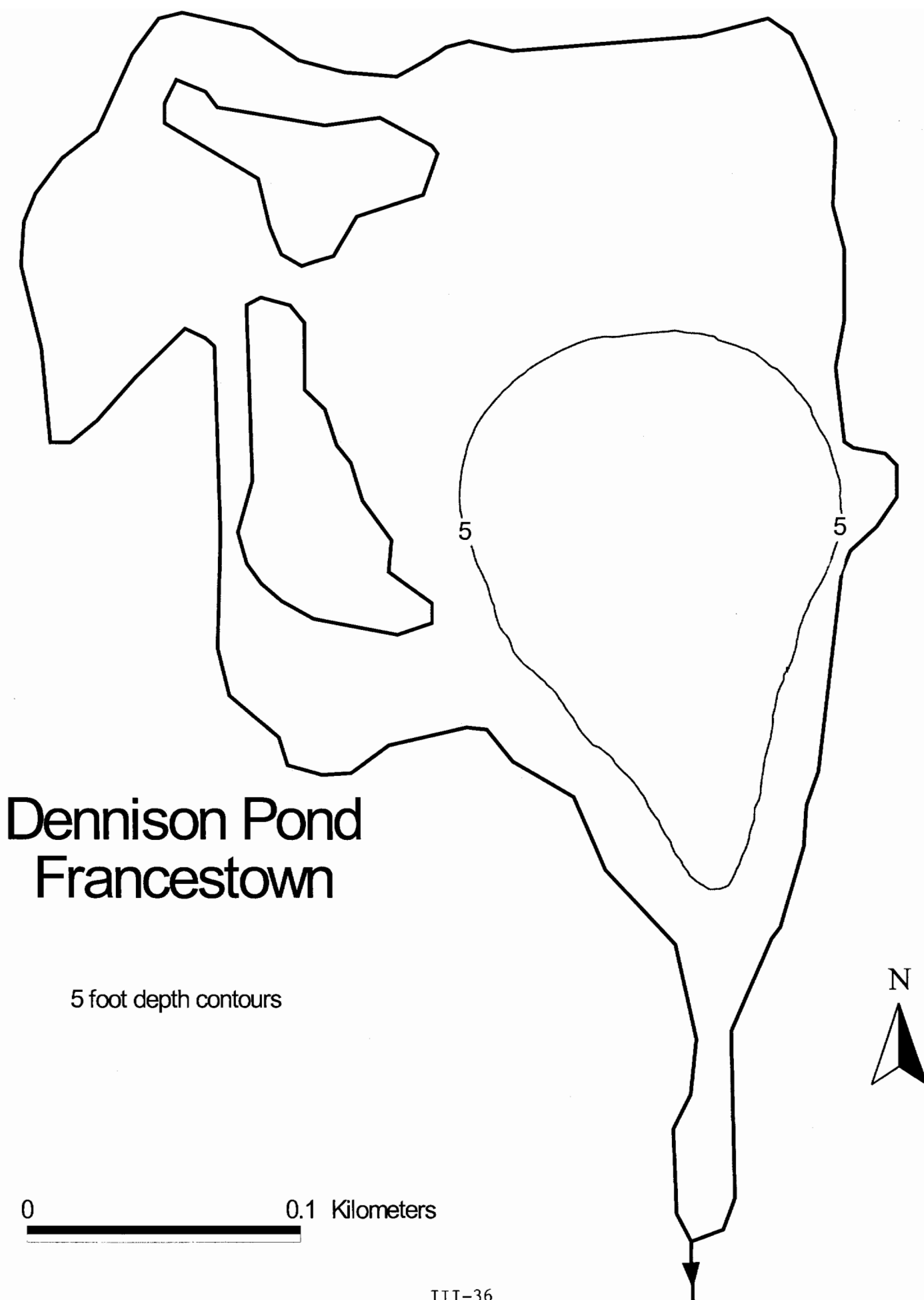
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2000

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	4	4	12	Eutro.

COMMENTS:

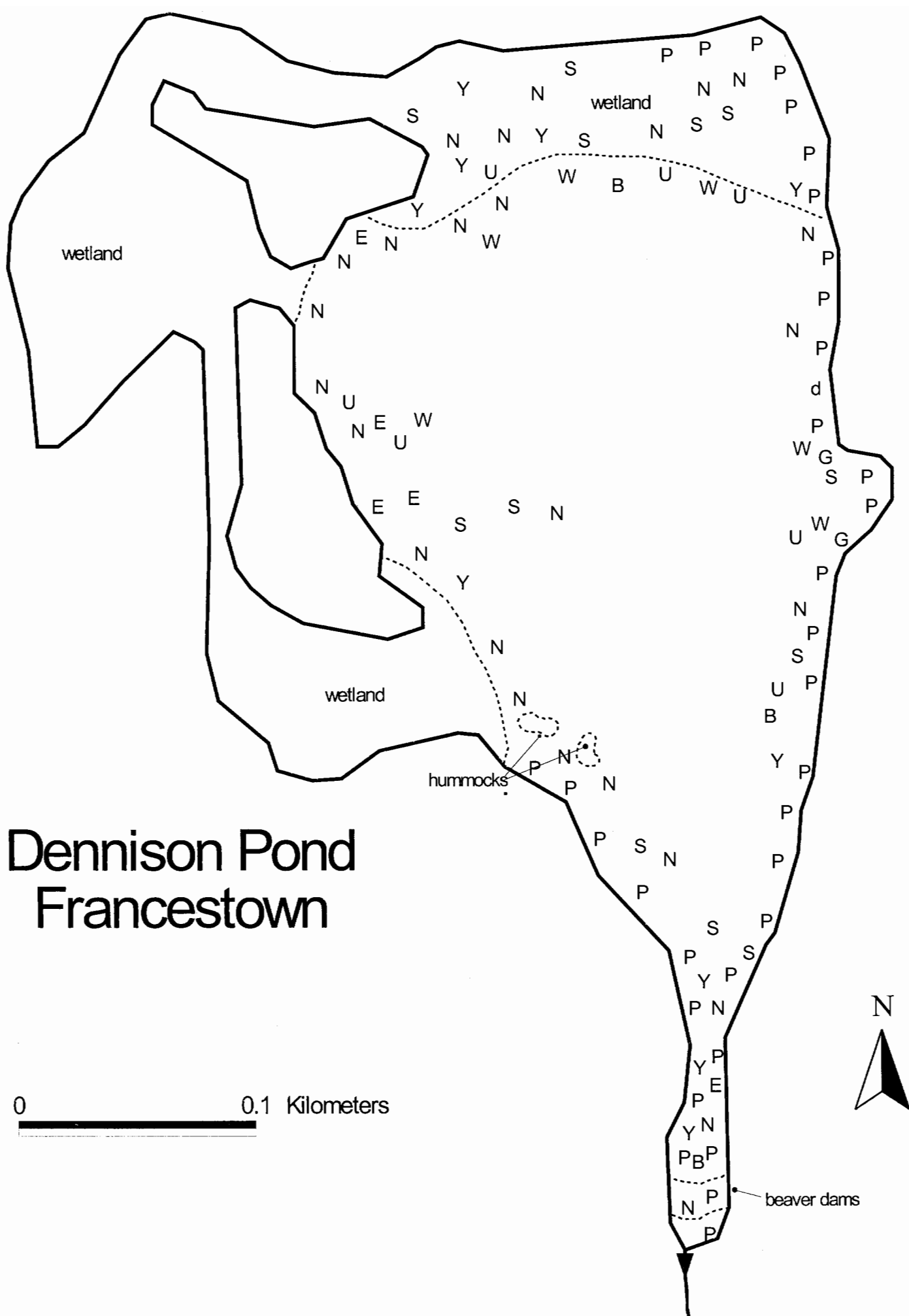
1. This is a shallow, eutrophic, circumneutral (pH near 7) pond with elevated plant and algal growth.



[illegible]

Dennison Pond Francestown

0 0.1 Kilometers

AQUATIC PLANT SURVEY

LAKE: DENNISON POND

TOWN: FRANCELSTOWN

DATE: 08/29/2000

[illegible]

OVERALL ABUNDANCE: Common/Abun

GENERAL OBSERVATIONS:

1. Northern and northwestern areas were marshy areas; vegetation was too dense for navigation.
2. The "common/abundant" rating is for the open water areas only. It would be "very abundant" if the wetland areas were included.
3. Plant hummocks and shoreline plants not in the water (and not reported above) included cattails, swamp loosestrife, leatherleaf, buttonbush, grasses and shrubs.